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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,356	03/01/2000	NICOLAS HOCHET	VEI0318PUSA	9843

7590 05/03/2002

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EXAMINER

MUSSER, BARBARA J

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 05/03/2002

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/445,356

Applicant(s)

HOCHET ET AL.

Examiner

Barbara J. Musser

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 10-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 5, 6, and 10/1-15/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaegers et al., in view of Amatangelo, Westlake, Sr. and Weber et al.

Jaegers et al. discloses a composite with a honeycomb core and first and second skins bonded thereon which is used to form corner protectors for boxes. One of the skins and the core is cut to form a hinge.(Figure 14; Col. 9, ll. 5-32)

The reference does not disclose forming the honeycomb and skins from thermoplastic, but rather from paper. Amatangelo discloses a thermoplastic honeycomb which is used to form a box.(Col. 2, ll. 59-62; Figure 2) The honeycomb is cut through to form a hinge.(Figure 4) Amatangelo discloses that it is commonly accepted by those in the art that a single sheet of cardboard is not strong enough to form a hinge, but that a single sheet of plastic can form an adequate hinge for most packaging purposes.(Col. 1, ll. 56- Col. 2, ll. 5) It would have been obvious to one skilled in the art at the time the invention was made to form the honeycomb and skins of Jaegers et al. from thermoplastic to form a stronger hinge as suggested by Amatangelo.(Col. 1, ll. 56- Col. 2, ll. 5)

The references cited above do not disclose the specifics of how the thermoplastic composite is formed though Jaegers et al. states the core and skins can be bonded in a die press, i.e. under pressure.(Col. 10, ll. 20) Westlake, Sr. discloses that thermoplastic honeycomb composites can be formed by placing the skins and honeycomb core in a mold, heating the stack, and then pressing the layers together to bond them.(Col. 2, ll. 38-Col. 3, ll. 5) It would have been obvious to one skilled in the art at the time the invention was made to form the composite of Jaegers et al and Amatangelo in a mold under temperature and pressure since this is a well-known and conventional bonding technique for thermoplastic honeycomb cores, as evidenced by Westlake, Sr. particularly since Jaegers et al. suggests forming the composite in a die press, i.e. under pressure. While the reference does not disclose the specific pressures used in bonding, one in the art would appreciate that the pressures and temperatures used in the molding operation are dependent on the specific polymer used and the intended flexibility of the composite and would use whatever pressure and temperature were required to form the composite. Absent unexpected results, the pressures claimed are considered obvious.

The references cited above do not disclose either skin containing reinforcement material. Weber et al. discloses that such reinforcement is well-known and conventional in the art.(Col. 1, ll. 8-16) It would have been obvious to one skilled in the art at the time the invention was made to reinforce at least one of the skins since such is well-known and conventional in the box arts as suggested by Weber et al.(Col. 1, ll. 8-16)

Regarding claim 2, Jaegers et al. discloses forming the honeycomb composite and then slitting it immediately after formation.(Col. 5, ll. 5-18) While that method is continuous, the reference discloses using a die press. Since such slitting is clearly intended to occur immediately after formation. Thus even when a die press is used, one in the art would appreciate that the slitting would occur soon after formation. Based on the continuous process, this would be within 30 seconds of formation of the composite.

Regarding claims 5 and 6, one in the art would appreciate that the required cutting could occur either inside or outside the press. The specifics of the cutting location would be within the purview of one in the art and would depend on the equipment used.

Regarding claim 10, Westlake, Sr. discloses that composites are heated prior to pressing.(Col. 2, ll. 64-68)

Regarding claim 11, while the reference does not disclose the specific temperatures used in bonding, one in the art would appreciate that the temperatures used in the molding operation are dependent on the specific polymer used and would use whatever temperature was required to melt the thermoplastic sufficiently to form the composite. Absent unexpected results, the temperatures claimed are considered obvious.

Regarding claim 12, the conventional reinforcement, as suggested by Weber, is glass fiber matting which is embedded in the thermoplastic.(Col. 1, ll. 8-10)

Regarding claim 13, Amatangelo suggests the use of polypropylene.(Col. 2, ll. 62)

Regarding claim 14, Jaegers et al. discloses the core being a honeycomb.(Figure 2)

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of Mumper(U.S. Patent 3,786,708).

Jaegers et al. discloses a method of cutting the honeycomb, but this method is only exemplary. Mumper discloses cutting a corrugated board into sections using a serrated blade which is pressed downward.(Figure 1; Col. 1, ll. 65-67) It would have been obvious to one skilled in the art at the time the invention was made to use a serrated knife in a straight downward motion to cut the first skin since this would prevent tearing of the board edges as taught by Mumper.(Col. 1, ll. 7-12) While the reference suggests a straight vertical slice, one in the art would appreciate that the composite of Jaegers is not intended to be cut completely through and that such a knife would not cut completely through all the honeycomb sections. Thus, it would have been obvious to one skilled in the art at the time the invention was made to move the knife horizontally as well as vertically when cutting the honeycomb to insure the entire section of honeycomb was cut.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of Northall.(U.S. Patent 1,491,134).

Jaegers et al. discloses a method of cutting the honeycomb, but this method is only exemplary. Northall discloses a method of cutting which prevents buckling of the blades (Col. 1, ll. 15-21) by using two serrated blades which reciprocate. Such devices are well-known and conventional in the cutting arts as shown for example by Northall and by the well-known electric bread knife. It would have been obvious to one skilled in the art at the time the invention was made to use this well-known and conventional cutting blade system since it prevents blade bending and since it cuts more quickly than using only one blade.

Response to Arguments

2. Applicant's arguments filed 3/6/02 have been fully considered but they are not persuasive.

Regarding applicant's argument that the channels of Jaeger are more than incisions, incising means either cutting or engraving. Engraving involves the removal of material. Thus an incision is not necessarily slitting without removal of material. Additionally, the claim is open. Thus after slitting, material can be removed. Finally, it is noted that Amatangelo discloses slitting without removal of material.

Regarding applicant's argument that Amatangelo is not a thermoplastic honeycomb, Jaeger et al. discloses a honeycomb while Amatangelo discloses a reason to make that constructions like that of Jaeger et al. thermoplastic.

Regarding applicant's argument that there is no reasonable expectation that Westlake's apparatus could be used with applicant's materials, Westlake discloses the honeycomb can be plastic or paper. This indicates that the apparatus can be used with

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plastics simply by varying the temperature and pressure used. While the apparatus of Westlake would cause an aluminum core to penetrate the facing sheets, there is no indication that under the right conditions, it would not enable a plastic core to penetrate and bond with its facing sheets. While this is a form of mechanical locking, under high temperature as in the apparatus of Westlake, the plastic core of Jaeger and Amatangelo would bond to the plastic facing sheets.

Regarding applicant's argument that there is no suggestion or motivation to use reinforcement in folded panels, it is well known to use reinforcement in facing sheets of honeycombs. The fact that no patent currently used shows reinforcement in a folded panel does not mean it would not have been obvious to add such reinforcement to a folded panel. The simple assertion that no one thought this could be done is not an affidavit.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


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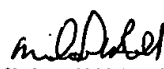
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Barbara J. Musser** whose telephone number is (703) 305-1352. The examiner can normally be reached on Monday-Thursday 7AM-4PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


BJM
May 1, 2002


Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700